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PATENT No. US 7,257,296 B2

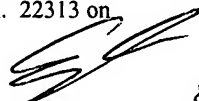
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENTEE(S) : Kyoung-Youm Kim et al.
PATENT NO. : US 7,257,296 B2
ISSUED : August 14, 2007
FOR : OPTICAL WAVEGUIDE ELEMENT WITH DIRECTIONAL COUPLER

Certificate of Mailing Under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA. 22313 on August 20, 2007.

Steve Cha, Reg. No. 44,069
(Name of Registered Rep.)

 8-20-07
(Signature and Date)

REQUEST FOR CERTIFICATE OF CORRECTION
UNDER 37 CFR 1.323

Attention Certificate of Corrections Branch
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate
AUG 27 2007
of Correction

Dear Sir:

In accordance with the provisions of 37 CFR 1.323, the Patent and Trademark Office is respectfully requested to issue a Certificate of Correction in the above-identified Patent to correct an error in the Assignee's address on the face of the Patent (Item 73). The Assignee's address should read

-- Suwon-Si --

as shown on the Issue Fee Transmittal filed on July 5, 2007, copy enclosed.

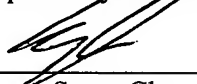
AUG 27 2007

Patent No US 7,257,296 B2
Page 2

As these mistakes were the fault of the Patent and Trademark Office, it is believed to be in order for the Patent and Trademark Office to issue a Certificate of Correction and to place such Certificate in the file, so that such will appear on any copies of the Patent which are ordered in the future. Moreover, since these mistakes are that of the Patent and Trademark Office, such should be done without charge.

Two (2) copies of Form PTO/SB/44 embodying the requested correction accompany this letter. Return of one copy of the Form duly certified is requested.

Respectfully submitted,



By: Steve Cha
Attorney for Applicant
Registration No. 44,069

Date: August 20, 2007

Enclosure: Copy of Issue Fee Transmittal filed on July 5, 2007
Form PTO/SB/44

Mail all correspondence to:
Steve S. Cha, Reg. No. 44,069
CHA & REITER, LLC
210 Route 4 East, Suite #103
Paramus, NJ 07652
Telephone: 201-226-9245
Fax: 201-226-9246

AUG 27 2007

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,257,296 B2

APPLICATION NO.: 10/692,343

ISSUE DATE : August 14, 2007

INVENTOR(S) : Kyoung-Youm Kim et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page

Item [73], Assignee's address, should read as follows:

--Suwon-Si.--

MAILING ADDRESS OF SENDER (Please do not use customer number below):

AUG 27 2007

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,257,296 B2

APPLICATION NO.: 10/692,343

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If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



US007257296B2

(12) **United States Patent**
Kim et al.

(10) **Patent No.:** **US 7,257,296 B2**
(45) **Date of Patent:** **Aug. 14, 2007**

(54) **OPTICAL WAVEGUIDE ELEMENT WITH DIRECTIONAL COUPLER**

5,633,962 A * 5/1997 Kurata 385/24
6,480,647 B1 * 11/2002 Kitamura 385/24

(75) Inventors: **Kyoung-Youm Kim**, Anyang-shi (KR);
Sun-Tae Jung, Anyang-shi (KR)

FOREIGN PATENT DOCUMENTS

JP 03223705 A * 10/1991

(73) Assignee: **Samsung Electronics Co., Ltd.**,
[Suwon-Di] Gyeonggi-Do (KR)

* cited by examiner

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 190 days.

Primary Examiner—Sung Pak

(74) *Attorney, Agent, or Firm*—Cha & Reiter, LLC

(21) Appl. No.: **10/692,343**

(57) **ABSTRACT**

(22) Filed: **Oct. 23, 2003**

(65) **Prior Publication Data**

US 2004/0252945 A1 Dec. 16, 2004

(30) **Foreign Application Priority Data**

Jun. 11, 2003 (KR) 10-2003-0037487

(51) **Int. Cl.**
G02B 6/26 (2006.01)

(52) **U.S. Cl.** 385/42; 385/28; 385/31

(58) **Field of Classification Search** None
See application file for complete search history.

(56) **References Cited**

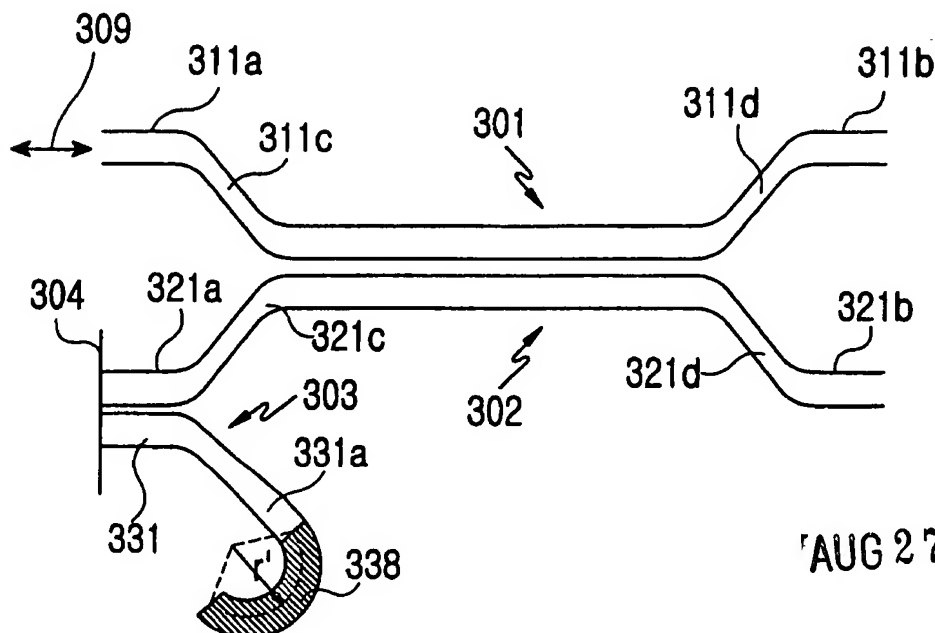
U.S. PATENT DOCUMENTS

5,200,612 A * 4/1993 Moriya et al. 250/239

An optical waveguide element having a directional coupler is disclosed. The element includes a first and a second waveguide located adjacent to each other at a predetermined portion for mode coupling, a first dummy waveguide extending from an one end of the second waveguide, a reflector installed on an end surface of the first dummy waveguide, and a second dummy waveguide located adjacent to the first dummy waveguide at a predetermined portion for a mode coupling. The optical signals progressing from the second dummy waveguide to the first dummy waveguide disappear while sequentially passing through the reflector and the second dummy waveguide. In the optical waveguide element, optical signals passing through the first dummy waveguide gradually disappear while passing through the reflector and the second dummy waveguide, thereby improving a bi-directional cross-talk.

20 Claims, 12 Drawing Sheets

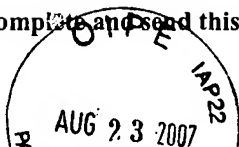
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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop IS, FEE
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P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** (571)-273-2885



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33942 7590 04/04/2007

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STEVE CHA	(Depositor's name)
<i>[Signature]</i>	(Signature)
9-5-07	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,343	10/23/2003	Kyoung-Youm Kim	5000-1-477	8522

TITLE OF INVENTION: OPTICAL WAVEGUIDE ELEMENT WITH DIRECTIONAL COUPLER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$0	\$1700	07/05/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
PAK, SUNG H	2874	385-042000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
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(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. CHA & REITER, LLC
2. _____
3. _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

SAMSUNG ELECTRONICS CO., LTD.

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

416 MAETAN-DONG, YEONGTONG-GU
SUWON-SI, GYEONGGI-DO
KOREA, REPUBLIC OF KOREA

AUG 27 2007

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☒ Advance Order - # of Copies 5

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5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

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Authorized Signature STEVE CHA
Typed or printed name STEVE CHA

Date 9-5-07
Registration No. 44,069

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